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CSD310 Assignment 3.2

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Normalized Tables

To start, I broke up the address into (street) address, city, state, and zip code for each (publisher and author). It feels a little less necessary here than for, say, an employee or customer database. Still, it may help if, for instance, tax needs to be calculated based on the local tax code for an author or publisher.

I also added an author\_id field since two authors could have the same first and last name.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1NF | | | | |
| publisher\_id | publisher\_name | publisher\_address | publisher\_city | publisher\_state |
| publisher\_zip | publisher\_email | book\_isbn | book\_name | book\_price |
| author\_id | author\_last\_name | author\_first\_name | author\_phone | author\_email |
| author\_address | author\_city | author\_state | author\_zip |  |

To further normalize the database, I decided to break them out into three tables and determine primary and foreign key columns. In the interest of space, I listed the column headers for each table vertically rather than horizontally, but in an actual database they would indeed be column headers.

|  |  |  |
| --- | --- | --- |
| 3NF | | |
| Publisher | **Author** | **Book** |
| publisher\_id (primary key) | author\_id (primary key) | book\_isbn (primary key) |
| publisher\_name | author\_last\_name | book\_name |
| publisher\_address | author\_first\_name | book\_price |
| publisher\_city | author\_address | publisher\_id (foreign key) |
| publisher\_state | author\_city | author\_id (foreign key) |
| publisher\_zip | author\_state |  |
| publisher\_email | author\_zip |  |
|  | author\_email |  |
|  | author\_phone |  |